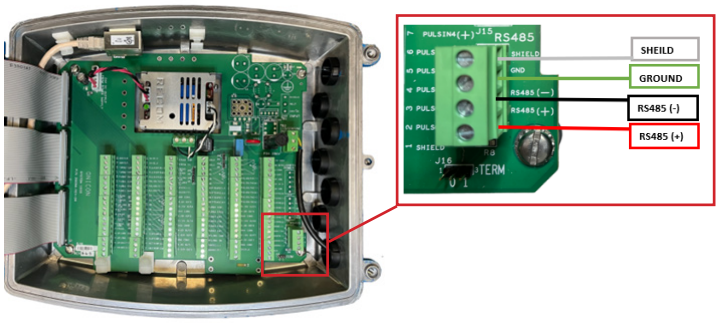
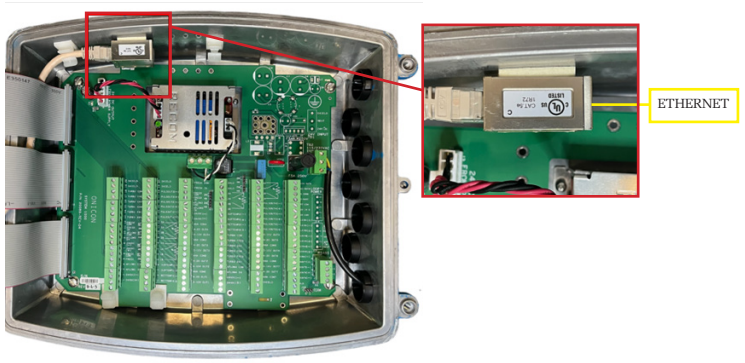
SYSTEM-1000
NETWORK QUICK START GUIDE

STEP 4

ONICON
Flow and Energy Measurement





Connecting via BACnet MSTP	Connecting via BACnet UDP/IP
1. Power on unit to verify it is functioning properly. After verifying power down the unit.	1. Power on unit to verify it is functioning properly. After verifying power down the unit.
2. Wire MSTP cables to unit. • The RS485 network cable connections are polarity sensitive and must be connected the same way on every device (i.e. + to + and - to -). • Shield drain connections should be daisy chained in the same manner as the signal cables for RS485. The shield drain wire should be left unterminated at the end of the cable and connected to earth only at the network master controller. Shield wires must not be connected to the RS485 connector on the System-1000 • The maximum number of devices allowed on an RS485 network segment without a repeater is 32. Adding more than 32 devices to a single segment may reduce the transceiver output voltage to a level that is too low to be distinguished from back ground noise on the cable.	2. Connect ethernet cable to unit.
3. Connect power to unit.	3. Connect power to unit.
4. Navigate to the systems network configuration. From the main menu select: User Configurations -> Network -> BACnet MSTP	4. Navigate to the systems network configuration. From the main menu select: User Configurations -> Network -> BACnet UDP/IP
5. Configure device as needed. Default values are listed below.	5. Configure device as needed. Default values are listed below.
Baud Rates: 38400 **Device Address Range**: 017 **Device Instance Range**: 57017 **Max Master**: 127	**Default Address**: 192.168.1.24 **Instance Number**: 57017 **Subnet Mask**: 255.255.255.0 **Gateway Address**: Programmable **UDP port**: 47808
6. Power cycle the device and it is now ready to connect to the controller or next device in the trunk.	6. Power cycle the device and it is now ready to connect to the controller or next device in the trunk.

Checking Network Status

Connecting via BACnet MSTP	Connecting via BACnet UDP/IP
1. From the main menu, select diagnostics • If the meter is connected to an active network, System-1000 display will show Active on the NETWORK message	1. From the main menu, select diagnostics • If the meter is connected to an active network, System-1000 display will show Active on the NETWORK message
2. Link Down: No traffic has been seen in 60 seconds Link Up: Traffic has been seen in the last 60 seconds	2. Link Down: The ethernet hardware does not detect that it is physically connected to another ethernet interface Up, Active: The ethernet hardware has seen traffic in the last 15 seconds Up, Inactive: No traffic has been seen by the ethernet hardware in 15 seconds

IMPORTANT NOTE FOR BACnet MS/TP CONNECTIONS

If the meter is not connected to an active network the following electrical testing can be performed with a multimeter. If the readings are outside for the normal ranges listed below, please refer to manual for common issues.

I. Check Resistance (set multimeter to Ohms)
- Shield
- Earth Ground

Normal reading: 0 Ohms

II. Check DC Voltage (set multimeter to DC)
- A-
- B+

Normal reading: 0.2 VDC

III. Check DC Voltage (set multimeter to DC)
- Earth Ground
- B+

Normal reading: 2.0 - 2.5 VDC

IV. Check DC Voltage (set multimeter to DC)
- Earth Ground
- A-

Normal reading: 2.0 - 2.5 VDC

V. Check DC Voltage (set multimeter to DC)
- B+
- Earth Ground

Normal reading: Less than 2.0 VDC

VI. Check DC Voltage (set multimeter to DC)
- A-
- Earth Ground

Normal reading: Less than 2.0 VDC